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EXAMINER

CHEN, KOU YI

ART UNIT	PAPER NUMBER
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2193

DATE MAILED: 06/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/083,174

Applicant(s)

KULKARNI ET AL.

Examiner

Kou-Yi K. Chen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 February 2002 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/25/2002</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to the application filed on February 25, 2002.
2. The priority date of this application is August 6, 2001.
3. Claims 1-11 are pending in the application.

Specification

4. Claim 8 is objected to because of the following informalities: (b) imputing data into the model abstraction. Appropriate correction is required.
5. The disclosure is objected to because of the following informalities: (b) imputing data into the model abstraction (in Specification page 4 line 7). Appropriate correction is required.

Claim Rejections - 35 USC § 101

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.
7. Claims 1-7 are rejected under 35 U.S.C. § 101 as being directed to nonstatutory subject matter.
8. Claim 1 recites: "A model framework for generating batch programs". The language of the claim raises a question as to whether the claim is directed merely to

software components, i.e., computer program per se. Computer program which is not tangibly embodied and executed by a piece of hardware does not produce useful, concrete, and tangible results to form the basis of statutory subject matter under 35 USC § 101.

Claims 2-7 either directly or indirectly depend from claim1, therefore, are rejected under the same reason set forth in claim 1 rejection.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claim 1 recites the limitation "characterized in that instantiation" in line 7. There is insufficient antecedent basis for the limitation in the claim.

11. Claim 1 recites the limitation "the appropriate input data" in lines 7-8. There is insufficient antecedent basis for the limitation in the claim.

12. Claim 2 recites the limitation "the modeling language" in line 1. There is insufficient antecedent basis for the limitation in the claim.

13. Claim 4 recites the limitation "the code" in line 1. There is insufficient antecedent basis for the limitation in the claim.

14. Claim 5 recites the limitation "the data provider" in line 1. There is insufficient antecedent basis for the limitation in the claim.

15. Claim 9 recites the limitation "the model framework" in line 1. There is insufficient antecedent basis for the limitation in the claim.

16. Claim 10 recites the limitation "the modeling language" in line 1. There is insufficient antecedent basis for the limitation in the claim.

Claim Rejections - 35 USC § 102

17. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

18. Claim 1-11 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,615,199 to Bowman-Amuah (hereinafter, "Bowman-Amuah").

As per claim 1

Bowman-Amuah teaches:

A model framework ("an abstract handle to a concrete object which a framework may then manipulate generically" in col. 196 lines 35-37) for generating batch programs

("Code generation. The ability to generate the application structure from the model is essential to high productivity. Furthermore, this step should be transparent to the user. As far as the user is concerned, a change to the model is a change to the code " in col. 176 lines 50-54, and "Batch processing is used to perform large scale repetitive processing where no user involvement is required. Batch support is an often overlooked area in architecture and component design" in col. 191, lines 48-51) comprising:

- an abstraction representing ("A system and method provide an abstraction factory pattern" in col. 2 lines 17-18) a batch program ("batch programs" in col. 192 line 22);
- an abstraction representing a batch function of the program ("The function of the batch "program'" in col. 192 line 32);
- an abstraction representing operation of the function ("It reads the input messages, controls the packaging of database units of work, and sends requests to the business component that performs the actual business logic associated with the messages" in col. 192 lines 33-36);
- an abstraction representing a data provider to the function ("A component-based batch architecture must support batch programs that read transactions that are really messages. These message transactions are read either from a flat file or from a database" in col. 192 lines 25-28); and
- an abstraction representing a context class of the function ("FIG. 56 illustrates a class diagram of the batch job hierarchy" in col. 197 lines 64-65);

characterized in that instantiation of the model ("do a 'shallow' instantiation by default" in col. 194 lines 54-55) with the appropriate input data parameters input to each

abstraction generates appropriate instances of batch functions including function operations wherein the generated instances are executable as part of a run sequence of the batch program ("FIG. 55 illustrates a flowchart for a method 5500 for representing a plurality of batch jobs of a system each with a unique class. In operations 5502 and 5504, an abstract class of abstract data required by a plurality of batch jobs is provided and a plurality of batch job sub-classes are defined. Each batch job sub-class includes batch specific data, and logic for processing the abstract data and the batch specific data upon the execution thereof. Each of the batch job sub-classes is represented with an object in operation 5506. In operations 5508 and 5510, one of the objects is identified and the logic of the batch job sub-classes associated with the identified object is thereby executed" in col. 197 lines 4-14, and also "represent each type of batch job in the system as its own class. An abstract class (BatchJob) will exist from which all specific types of batch jobs will derive from. The abstract BatchJob contains data that all batch jobs require: name, current status (pending, started, finished, deleted), messages encountered during its run, various times (submission, start, completion), and a priority, for example. It also should provide some default behaviors including running the job and logic to execute before and after the run" in col. 197 lines 55-65).

As per claim 2, the rejection of claim 1 is incorporated, and further, Bowman-Amuah teaches:

wherein the modeling language is unified modeling language ("UML & Case Tools in the Development Architecture" in col. 177 line 7, also see FIG. 60).

As per claim 3, the rejection of claim 1 is incorporated, and further, Bowman-Amuah teaches:

wherein instantiation creates user instance functions that are operationally linked and together define a user instance of batch program ("do a "shallow" instantiation by default, but provide the client program with a way to build the complete object on demand to provide more deterministic performance" in col. 194 lines 54-57).

As per claim 4, the rejection of claim 3 is incorporated, and further, Bowman-Amuah teaches:

wherein the code required to generate the user instance functions defining the program is automatically generated by the model as a result of data input and subsequent instantiation ("efficient initialization methods may be generated and maintained automatically from the information by a code generator once it becomes clear what the most efficient implementation is" in col. 189 lines 30-33).

As per claim 5, the rejection of claim 1 is incorporated, and further, Bowman-Amuah teaches:

wherein the data provider obtains its data from a database by query ("query the database" in col. 190 lines 15-16).

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As per claim 6, the rejection of claim 1 is incorporated, and further, Bowman-Amuah teaches:

wherein one batch function indicates if memory management should be provided ("make the caching policy itself be an object (consider the Strategy pattern for making an object from an algorithm) so you can change the policy on demand" in col. 194 lines 11-13).

As per claim 7, the rejection of claim 1 is incorporated, and further, Bowman-Amuah teaches:

wherein the class encapsulates restart information and information passed between different operations ("An architecture that supports batch jobs usually has certain characteristics. It must be able to support checkpoints and rollback, restart and recovery" in col. 197 lines 37-39).

As per claim 8

Bowman-Amuah teaches:

A method for developing an executable batch program through model instantiation comprising steps of:

- (a) providing an executable model abstraction including program, function, class, data provider, and operation objects (see claim 1 rejection);
- (b) imputing data into the model abstraction, the input data defining a user instance class of batch program (see claim 1 rejection);

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- (c) instantiating the model abstraction (see claim 1 rejection);
- (d) generating code within the model abstraction, the code defining user instances of batch functions including operations and execution orders (see claim 1 and claim 3 rejections); and
- (e) compiling the generated code to build the user instance batch program ("An availability of server components is determined and a listing of available server components is compiled in operations 14906 and 14908" in col. 273 lines 45-48).

As per claim 9, the rejection of claim 8 is incorporated, and further, Bowman-Amuah teaches:

wherein the model framework is a meta model framework ("The present invention uses a robust process for developing component-based solutions. It includes deliverables that are above and beyond the Unified Modeling Language (UML). Furthermore, projects often customize it. The environment must provide the ability to extend the information model (i.e., the meta-model)" in col. 176 lines 22-27).

As per claim 10, the rejection of claim 8 is incorporated, and further, Bowman-Amuah teaches:

wherein in step (a) the modeling language is UML (see claim 2 and claim 9 rejections).

As per claim 11, the rejection of claim 8 is incorporated, and further, Bowman-Amuah teaches:

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wherein in steps (d) and (e) are automated (see claim 4 and claim 8 rejections).

Conclusion

19. The prior art made of record, and not relied upon, is considered pertinent to applicant's disclosure.

Contact Information

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Kou-Yi K. Chen** whose telephone number is **571-272-8592**. The examiner can normally be reached **from 8:30 am to 5:00 pm on M-F**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on 571-272-3719. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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